

ARPA Order No. 952

Contractor--Kalamazoo College

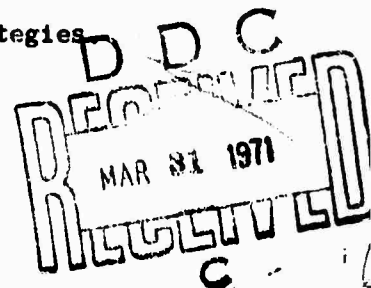
Contract No. N00014-67-A-0098-0001

Title--Institutional Obstacles to Industrial Development in Peru

# ABSTRACT

Owing to delays in the State Department clearance procedure, the Peru-Kalamazoo Project did not get underway until September of 1966. Therefore, this report covers only the first three months of field activity of the project. This was an exploratory stage of the project, in which we visited some twenty-five plants in twenty different industries in order to get an overview of their operations on the plant floor, and to interview management about problems they faced in carrying out their jobs. Labor leaders and government personnel concerned with industrial development were also interviewed as to their opinions about the principle problems being encountered in the industrial development of Peru.

Although the results are highly tentative at this stage of the project, some aspects of a structure of underdevelopment can be identified. That is to say, the problems in the area of production such as acquiring raw materials, service by suppliers, problems internal to the plant and scarcity of skills at both management and labor levels and the distrust between management and labor as well as financing and marketing problems, are all interrelated and form part of a national structure of underdevelopment. The market for industrial products in Peru is severely limited both in size and in capacity. The "solutions" attempted at all levels of both private industry and government seem to further limit the market and, in some ways, slow down the industrial development of Peru. Decisions and policies designed to promote development are frequently mitigated by policies designed to solve other problems. Fear of future monetary and political instability inhibits long-range planning in all sectors, and leads to short-run maximization strategies.



## **INTRODUCTION**

The Peru-Kalamazoo Project is a two-year project doing a comparative study between similar industries producing the same product, on the same scale, with the same technology in both Peru and in Kalamazoo, Michigan to specify as nearly as possible the institutional obstacles to industrial development in Peru. We will be concerned with the following questions:

- (1) To what extent do the same technology and scale of operation require the same work organization and behavior in two different countries at different stages of development?
- (2) To what extent are work organization and behavior in industry affected by different sets of institutional conditions operating in the society at large?
- (3) In what ways do these sets of institutional influences either promote or impede the industrial development of Peru?

This report is concerned with giving some of the results of our first two and a half months of field work. This has been an exploratory stage in which we have been concerned with visiting 25 industrial plants in 20 different industries, and talking with businessmen, engineers, and labor leaders as to the problems they face in carrying out their jobs. We also attended a number of conferences and meetings with engineers, businessmen, government officials, and labor leaders. During this period, we also helped design a questionnaire study to be conducted by an ESAN faculty member with ESAN graduates as respondents.

Since it has been the exploratory stage, a number of conditions must be kept in mind:

First, no systematic sample has been attempted, and therefore no hard and fast conclusions should be drawn from this preliminary work.

Second, since we visited plants and interviewed to discover problems that

people confront in their work, all of the various things which do not constitute problems will be ignored in this report. For instance, the many advantages of Peru in terms of natural resources, climate, etc., do not constitute problems. Similarly, in many plants and in particular subject areas, such things as the supply of raw materials, labor relations, etc., do not constitute problems and these also will be ignored.

Third, it should be kept in mind that no single plant or industry faces all of the problems that we will mention. Some of these problems vary a great deal by industry and many of them also vary within different companies in the same industry. Most of the problems mentioned do have to be dealt with by most firms in one way or another and therefore can be considered as part of a general over-all structure, whether they are being dealt with successfully or not in any given case.

Fourth, no comparative statements can be made at this time, since we have not yet worked in Kalamazoo. We would expect to find many of the same problems, since they are common industrial problems everywhere. But, we would also expect to find differences in the relative importance of any given problem. At present, we have no objective measures of the relative importance of industrial problems in either country, and can therefore make no comparative statements or evaluations.

**SUMMARY OF THE PROBLEMS CONFRONTING PERUVIAN INDUSTRY IN THE  
AREAS OF PRODUCTION, FINANCE AND MARKETING,  
ACCORDING TO THE PEOPLE INTERVIEWED**

**A. Area of Production**

1. The cost of raw material. In the case of imported raw materials, the cost of the product plus freight to Callao is only part of the total costs. Unloading, storage and transport costs to the factory further raise material costs. In a metal furniture factory these costs came to 30% above the CIF price of the materials in Callao. One must add to this the losses of machinery and pieces upon being unloaded in Callao. Industries which import semi-manufactured goods are particularly apt to suffer from these latter problems.

Many of the buyers of Peruvian raw materials complained of the quality. In order to process local materials in several industries, preliminary treatments were necessary, which raise the cost of production. In these cases the manufacturer said that it paid to import raw material in spite of the import duties rather than to process national materials. For example, in woolen textiles only 30% of the net weight of the raw material which arrives at the factory survives the cleaning operations and can be used. In the case of tires, the crude rubber which comes from the jungle must go through several cleaning operations before it can be incorporated into the normal production run. Indirectly, the law at present protects deficiencies of the suppliers of raw materials and provides little incentive to overcome them. For example, in the case of tires, the manufacturer is required to buy all of the local material before he can import foreign material. With such a guaranteed market, the national supplier of raw materials lacks incentive to improve his product.

2. Inventories. Raw materials in storage constitute a great part of the investment of enterprises, for a variety of reasons. Where manufacturers

use materials that are not produced in the country, they must have large inventories to keep their normal operations going. This would mean an inventory of anywhere from two to six months. In the case of the pharmaceutical industry, the problem is particularly serious. For example, in one company only four out of 168 materials that they used were national materials. In many other industries, such as plastics, all or almost all of the material is imported. In addition to normal delays in shipping, etc., once the material arrives in Callao the manufacturer must count on approximately three weeks for the unloading, storage and inspection of the materials.

Another problem in this area is that managers frequently pay little systematic attention to rotating stocks and purchasing and using them in economic lots.

3. Poor service by suppliers. There are supplying firms in the country which occupy a near-monopolistic position in the market, and which are under no pressure to offer good service to their clients, nor to extend the credit necessary for their clients to expand their businesses. Even in cases where suppliers do not enjoy monopolistic advantages, there seems to be little competitive pressure to improve credit and service facilities for clients.
4. Dis-equilibrium among the diverse operations in the plant. Various industries have purchased modern machinery for certain operations in the plant, leaving the rest of the operations at a productive disadvantage and causing a series of bottlenecks in the plant. This has always been one of the classic problems of technological change in industry. The purchase of these machines is the result of super salesmanship on the part of foreign

manufacturers who have convinced local management of the quality of their product, in spite of its lack of functionality in the total production process in Peru. An example of this is a textile plant in which finishing operations are so efficient that their machinery can only be utilized four hours a week. Either they must buy cloth for finishing from other plants or paralyze their most productive operations in order to achieve some fluidity in the production line.

5. Inefficiency in operations owing to producing a great variety of models on a small scale. The newest automobile assembly plants produce as many as 15 models, even though their daily production may range from 12-40 units. We found textile plants producing 200 different varieties of cloth, and a furniture factory which offered 1500 different models, even though in any given year they would not produce a single one of many of those models. All of this contributes to very short production runs, and a great deal of time spent in setting-up in order to produce. It also makes it difficult to train labor to produce efficiently, since it demands a great deal of work knowledge on the part of labor.
6. Lack of management skills. Very frequently management centralizes information and the control of all operations at the top, even though they may have neither the time nor the capacity to deal with all of these problems. In many cases, managers must dedicate themselves almost exclusively to problems with their suppliers or their clients, to the neglect of the basic production processes in their business. For example, medium size fishing companies apparently have almost continuous problems with their suppliers. It should also be mentioned that in many factories management guards a great deal of secret information to which not even the accountant has access,

with the result that employees at the second level are not accustomed to assuming responsibilities, and when a problem presents itself they are both unwilling and unable to make a decision.

Modern management skills are not much in evidence. For example, industrial engineering, with its studies of plant layout, methods of work, time studies, and control of inventories, is quite rare. These deficiencies are readily evident upon visiting plants and seeing the great stocks of materials, accumulations of inventories, and inefficient machinery layout. Management is also frequently lacking in knowledge about tax laws, partly owing to the confusion and constant change in the laws themselves. This gives rise to two sorts of problems. There is the possibility of serious fines for not complying with the law. On the other hand, some companies regularly pay more taxes than they should. For example, in transfers of goods in consignment, many companies pay the sales stamp tax twice when it is not really necessary to pay more than once. One accountant estimates that many companies are paying 5-10% more in taxes per year than they should.

7. Lack of specialized labor. At Peru's present stage of development, there is very little in the way of specialized labor available in the labor market and the factories must train them. Nevertheless, many problems in the plants are due to a lack of planning in the operations that could be avoided. For example, the great diversity of models and the continuous change of work assignments makes it difficult to maximize on both the training and the utilization of labor. Labor is frequently trained simply by watching an older operative and beginning work as a skilled person when they feel they are ready. This results in the incompetence and poor work habits of the senior worker being passed to the junior worker.

It is interesting to note that workers are fully aware of this shortage of skilled labor among themselves, but they also notice the scarcity of skilled management. In one group interview with seventeen workers in an old industry, on having to choose between the various problems confronting Peruvian industry, they voted for the lack of preparation for personnel as the number one problem. Upon asking them to refine this and decide in which of the two sectors this problem was most serious, labor or the administrative sector, the vote was evenly divided between the two.

As many authors have noted, there is a great shortage of middle management personnel at the level of supervisors and technicians. Surprisingly, this shortage is particularly notable in textile and glass companies even though these industries have been long established in Peru. Scarcity of personnel at this level has been cited in several cases as the main factor limiting expansion in the industry.

8. Distrust between management and labor. There is very little communication between the two sectors. Thus when bringing about changes in methods of work, or putting into operation new machinery, workmen frequently are the last to know. Several cases were noted in which extremely expensive machinery had been bought and installed without the advance knowledge and consent of the union, causing labor conflicts. The result has been so far that the new operations have been paralyzed and the new machinery stands idle. Labor leaders complained that they are not informed on the general progress of the company, and therefore cannot make realistic claims during contract negotiations. They said that there had been a number of cases where, through ignorance, the union insisted on more than the company could give, with the result that the company failed.



9. Labor problems due to modernization of factories. In those industries which are trying to modernize their machinery and readjust workloads, there have been reports of difficulties with the unions with respect to both workloads and salaries. As a result, some factories that buy new machinery prefer to set up new plants with less than twenty workmen and thus avoid the possibility of having a union.

B. Finances. In many industries there is a great need for medium and long term loans, in order to finance working capital in such areas as inventories and current accounts. This problem is particularly notable in medium size fishing companies, where sizeable amounts of capital must be tied up over a number of months in inventories of fishmeal. The commercial banks charge high interest for loans (the total charge usually running between 18-24%), and by law may only give them in the short run. It is difficult to get loans from the state development banks, since they demand many guarantees. In a concrete case of fishing companies, they asked for bank financing for fifty percent of the loan and collateral for the balance.

C. Marketing. For lack of a good marketing infrastructure, companies frequently must assume the role of intermediaries, a job for which they are not qualified. In one of the industries visited, there are sales organizations in which there is no control over the labor of the salesmen, advertisers, and sales campaigns.

Many sales people are interested only in short run success rather than in developing a clientele over the long run. As a result, they charge very high prices for their products and render very poor service to the consumer.

In this part of the report we have simply enumerated a series of factors which have been mentioned by our respondents as problems they face in carrying out their jobs. The majority of these problems are no doubt common to any industrial

environment, but assume particular importance in countries which find themselves in the first stages of industrial development. In the remainder of the report we will explore some of the ways in which these various isolated factors are linked to form a larger structure of problems with which Peru as a nation must deal.

## **THE LIMITED MARKET: ITS CAUSES AND CONSEQUENCES**

One way to analyse some of the problems confronting Peruvian industry is to examine some of the aspects of the over-all market in which Peruvian manufacturers find themselves. Competition in the world markets has already been well established and new producers find it difficult to match well-established producers in both quality and price. The internal market in Peru is severely limited, due both to the small size of the population and to the small purchasing capacity available to those who are in the market. This in turn means that in many industries, the most advanced technology known cannot be used since it produces too large a volume for the local market. Many things must be imported, including machinery, and frequently raw and semi-finished materials. Shipping costs, unloading and storage costs, and import duties all serve to make these items more expensive in Peru than in many other countries. There is also a long time-lag involved in getting supplies from abroad, which means that scarce and expensive capital must be tied up for a long period of time by Peruvian producers. They must also tie up more capital in inventories of spare parts and supplies, since these are frequently imported from abroad and a steady supply, regularly delivered, is not feasible.

All of these factors serve to raise the cost of Peruvian industrial products. Therefore, there is need for protection of infant industries. The protection policy used to date has had various effects in different industries, but one of the standard complaints of Peruvian industrialists is that where local materials are available, high tariffs of 75-100% are placed on the importation of foreign raw materials. This allows the Peruvian producer of raw materials and semi-finished goods to charge somewhere around 75% above the world price for his goods. With this as a base, other cost factors are added on and the final product is extremely expensive to the consumer. Another aspect of this problem is that while the import

duties are specific, and give the Peruvian producer of raw material an advantage in the home market, there are no specifications with respect to the quality of local products. We have found in many industries a preference to pay 100% duty on imported raw materials rather than buy local raw material because of the difference in quality. That is, they find it cheaper and more efficient to pay a high price than to go through the extra processes, and suffer the breakdowns in the production line that are involved with the use of local materials. This is doubtless a temporary condition in the present stage of Peruvian development which will be overcome in the near future as norms are developed and accepted.

One of the results of protectionism, presently evident, is that Peruvian-made products sell at very high prices in the local market. The large gap between the world price and the price within the protected market encourages contraband. The paradoxical conclusion is that the Industrial Promotion Law promotes both Peruvian industry and competition for Peruvian industry through contraband. Thus both the contrabandistas and owners of local industries have an interest in high tariffs since both of them profit from them. One economic consequence is that contraband opens up a second market in those areas where it is sold, and serves considerable numbers of consumers. It has also been argued that contraband has been one of the most effective forces promoting the modernization of the textile industry. It is difficult to assess the over-all economic impact of relatively high rates of protection combined with contraband, since it is not at all certain that if contraband were effectively stopped that Peruvian industry would expand to meet the needs now satisfied by contraband, and at prices which people could afford. It is clear, however, that in the struggle between Peruvian industrialists and contrabandistas for sales in the local market, the contrabandista enjoys a considerable cost advantage over the industrialist. The industrialist must pay the costs of production

and all import taxes, transportation costs, and taxes on sales, as well as income taxes. The contrabandista, by the nature of his operation, avoids paying all duties and taxes, and frequently can also avoid paying transportation costs from the country of origin.

We have seen how high rates of protection permit high prices for locally produced raw materials, and that this raises production costs. The cost of production may be quite high, but the price of the product to the final consumer is usually further multiplied by the sizeable profit margins exacted each time the goods change hands in the final distribution process. Inflated profit margins not only serve to provide assurance of healthy profits, even after paying 18-24% on borrowed capital, they also serve to compensate large errors and misjudgments as to the real costs of production. The pressure to plan carefully, and carry out production and marketing functions efficiently, is thereby reduced. If a company budgets for a profit of 80%, and through miscalculation earns only 50%, it can still remain in business.

One other factor that should be kept in mind, which contributes to this circle, is the system of indirect taxes which are levied on sales, regardless of profit rates. Since one pays the same sales taxes regardless of profits, it is worthwhile to establish a pricing system which maximizes profits per unit on a small volume of production, rather than to try to maximize total profits by means of a small unit profit on a large volume of sales. The high price of the final product serves to limit the already limited market even further. Our circle is complete. Both private and public policy combined help reinforce and rationalize the already prevalent assumption of inelastic demand. The net effect is the further limitation of the national market. There is little evidence that the private sector is trying to test the hypothesis that if prices were lowered, the market would widen consider-

ably, and a greater percentage of the Peruvian population could thus participate, both as producers and consumers, in a growing economy.

In the above paragraphs we have attempted to show that much of the behavior encountered does not make economic sense as far as national development is concerned. Nevertheless, we can see that a great deal of this behavior is rational from the individual point of view, if we assume that one must plan to recuperate investment costs quickly at high rates of profit, since in the near future there may be an unforeseeable radical change in government policy, or at least a monetary devaluation. Given a widespread fear of future instability, it makes sense to try to maximize returns on invested capital in the very short run. Not only do industrialists act as though they assume monetary and political instability in the very near future, banks, even governmental development banks, apparently do also, as indicated by their policy of high interest charges on small loans for short periods, and even then only with guarantees that practically eliminate all risk.

## INDUSTRIAL DEVELOPMENT AND PUBLIC ADMINISTRATION

According to Jimenez, about every 25 to 30 years Peru finds it necessary to carry out a general reform in public administration.\* We are now in the process of just such a reformation. Older techniques are apparently not adequate to the new problems of rapid economic development, and administrative reforms now being planned and carried out are designed to simplify and speed up governmental operations. It is somewhat paradoxical that, while all power is concentrated in Lima, within Lima it is widely dispersed in all sorts of agencies which have been created by many special laws, whose activities are being financed by a bewildering variety of special taxes, paid into special funds. Even seasoned businessmen are uncertain as to whether or not they really understand all the relevant tax laws. Men entering industry for the first time experience great difficulties in understanding and complying with all the various tax laws. We have heard of cases where an industrialist requests an interpretation from the authorities to make sure that he is complying with the laws. Owing to a shortage of personnel in the agency, several months may pass before an interpretation is given. At this time, the industrialist discovers that he not only owes taxes, but that he must also pay a sizeable fine for being delinquent.

The government finds itself in the dilemma of wishing to establish a structure that will promote economic development in the long run, while simultaneously facing urgent day-to-day needs in the short run. It is inevitable that laws passed to accomplish one of these purposes conflict with laws designed to accomplish the purposes of the other. Thus, while the Industrial Promotion Law employs tax exemptions to encourage investment in industry, other laws must be passed to collect

---

\*Jimenez, Juan I., "La Reforma de la Administracion Publica," unpublished paper presented at the CADE 66 in Paracas, Peru.

the taxes needed to carry out the functions of government. The one need frequently demands that the other be sacrificed. The multiplicity of agencies which act independently necessarily adds to the confusion, and contributes to the creation of policies which are at cross-purposes with one another.

That government officials are well aware of these problems is most clearly evidenced by the large number of studies now under way, or recently completed, designed to reorganize public administration. In addition to such large programs as the Oficina Nacional de Racionalizacion y Capacitacion de la Administracion Publica (ONRAP), specific projects are underway in particular agencies, such as the Superintendencia de Contribuciones and the Aduana to improve tax and customs administration. Many other jointly-sponsored efforts, such as ESAN, SENATI, and CELP, are designed to provide training for specialized personnel needed at different levels in the private sector.

The rate of change in Peru at the present time is such that it is difficult to specify which of the problems mentioned above will be still considered serious a few years from now. Most of them are undergoing study and remedial action at the present time and desire to cope successfully with these problems is readily evident. The purpose of the Proyecto Peru-Kalamazoo is to contribute a part of the knowledge needed to help accelerate Peru's industrial development.